

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
ALEXANDRIA DIVISION

SATYAJIT SANYAL

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Plaintiff

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v.

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Case No. 1:14-cv-00960-JCC-TCB

TOYOTA MOTOR NORTH AMERICA,
INC, et al.

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Defendants

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**MEMORANDUM IN SUPPORT OF
DEFENDANTS' MOTION FOR SUMMARY JUDGMENT**

Defendants Toyota Motor Sales, U.S.A., Inc. ("TMS"), Toyota Motor Manufacturing Kentucky, Inc. and Toyota Motor Engineering & Manufacturing North America, Inc. (collectively "Defendants"), by their attorneys, hereby submit this Memorandum in support of their Motion for Summary Judgment.

Introduction

Pro se Plaintiff Satyajit Sanyal was involved in a single-vehicle accident involving his 2011 Toyota Camry hitting a tree (the "subject accident"). *See* Amended Complaint, Document 15, at ¶ 3. Plaintiff claims the accident was caused by defects in the subject Camry, and that he suffered injuries in the accident as a result of additional defects. *Id.* at ¶ 22.

Defendants are entitled to summary judgment on all of Plaintiff's claims for two independent reasons. First, Plaintiff has no expert witnesses to testify at trial, and therefore has no evidence that the subject Camry was defective at the time of the accident or at the time it left

Defendants' possession. Second, Plaintiff's lack of expert witnesses leaves him without a qualified witness to testify that the alleged defects in the subject Camry caused his injuries.

Background

The subject accident occurred on July 10, 2012. *See* Police Report, attached hereto as Ex. 1, at 1. The investigating officer noted that Plaintiff "appeared to have lost consciousness." *Id.* at 5. He reported that "[r]escue personnel arrived on scene, screened [Plaintiff] for a diabetic emergency with negative results but did note significantly diminished response from the left side of his body." *Id.* The officer reported that Plaintiff had no apparent physical injury, *id.* at 1 (noting "Injury Type" 4, corresponding to "No Apparent Injury"), and specifically noted that there was no defect in Plaintiff's Camry. *Id.* at 2, box V5.

Following the accident, Plaintiff was transported to Reston Hospital Center. In the Emergency Room, it was noted that Plaintiff "has a history of occasional seizures." *See* Reston Hospital Center Clinical Provider Note, attached hereto as Ex. 2, at 1. Emergency Room personnel also noted that Plaintiff "reportedly had a definite seizure." *Id.* Plaintiff reportedly told Emergency Room personnel that "he remembers going to work but does not remember prior [sic] to hitting the tree." *Id.* Also of import to this case is the fact that Plaintiff was admitted to the hospital on this occasion not because of injuries he received in the accident, but because he was having recurring seizures. The Emergency Room records note that "[j]ust prior to d/c [discharge] patient became unconscious and unresponsive for the third time today. He clearly had another seizure. Given this is the third episode and the patient lives alone the decision was made to admit him for anti-epileptic meds and neuro observation." *Id.*

Plaintiff was seen in consultation by Mrunalini Chakurkar, M.D. on July 10, 2012. Dr. Chakurkar noted that at some time prior to the accident Plaintiff would "hav[e] seizure [sic]

approximately once every 2 weeks,” and that “upon awakening, [Plaintiff] would be aware of his surroundings and oriented. He did not remember things that happened immediately prior to the seizure” *See* Dr. Chakurkar Consultation report, attached hereto as Ex. 3, at 1. Dr. Chakurkar noted that “[t]his morning, [Plaintiff] remembers going to work, . . . and he does not remember anything after that he came about [sic] when EMS was surrounding him.” *Id.* Dr. Chakurkar further noted that at the time of his admission to the hospital Plaintiff’s “Tegretol [an anti-seizure medication] level was found to be subtherapeutic,” *id.*, and that the “subtherapeutic carbamazepine [Tegretol] level may have contributed to the patient’s symptoms.” *Id.* at 2.

Plaintiff was seen in consultation by Tajammul Ehsan, M.D. on July 12, 2012. Dr. Ehsan noted that Plaintiff “comes into the hospital with breakthrough seizures.” *See* Dr. Ehsan Consultation report, attached hereto as Ex. 4, at 1. Dr. Ehsan concluded that Plaintiff’s “breakthrough seizures *result[ed] in [the] motor vehicle accident* with further episodes witnessed in the ER. This occurred in the setting of subtherapeutic Tegretol level” *Id.* at 2 (emphasis supplied).

On June 30, 2014, Plaintiff filed a Complaint in the Circuit Court for Fairfax County against Defendants. Defendants removed the action to this Court on diversity grounds, and filed a Motion for More Definite Statement. On September 30, 2014, this Court granted the Motion for More Definite Statement and ordered Plaintiff to file an Amended Complaint on or before October 21, 2014. On October 16, 2014, Plaintiff filed an Amended Complaint that pleads causes of action for negligence and breach of warranty against Defendants.

Plaintiff initially alleged that his Toyota Camry is defective, and that he was injured, solely because of the “failure in deployment of any of the driver side AIRBAGS [sic] despite” what he contends was a “significant” impact with the tree. *See, e.g.,* Amended Complaint at ¶ 3;

see also Plaintiff's Response to Defendant Toyota Motor Sales, U.S.A., Inc. Interrogatory No. 1.¹ However, in his March 19, 2015 responses to TMS's Interrogatories, Plaintiff also claimed for the first time that the subject accident was caused by an unintended acceleration event, *id.*, Response to Interrogatory No. 15, and that his Toyota Camry is also defective because it "experienced Unintended Acceleration event [sic]" and because of "lack of effective brake override system to prevent, mitigate or stop Unintended Acceleration incidents." *Id.*, Response to Interrogatory No. 1. Plaintiff conceded at deposition that despite having discussed the accident on numerous occasions prior to and after filing this lawsuit, writing to Toyota regarding the accident, and filing a Complaint and Amended Complaint, he never claimed to have experienced an unintended acceleration event before responding to TMS's discovery requests. *See* March 27, 2015 Deposition of Satyajit Sanyal ("Sanyal Deposition") at p. 136, line 21 to p. 142, line 1.²

The subject Toyota Camry's airbag electronic control unit ("ECU") was imaged on April 3, 2015. *See* May 4, 2015 Affidavit of Jennifer Yaek, M.S., attached hereto as Ex. 7, at ¶ 4. Ms. Yaek is Defendants' expert accident reconstructionist. She obtained a Master of Science degree in Biomedical Engineering from Wayne State University, a Master of Science degree in Mechanical Engineering from the University of Michigan, and a Bachelor of Science degree in Mechanical Engineering from Michigan Technological University. *Id.* at ¶ 2. She is a registered professional engineer in the states of Michigan, Alabama and Mississippi. She has participated in many accident reconstruction continuing education courses, including certification as both an airbag crash data retrieval technician and analyst. *Id.* Over the past 19 years, she has reconstructed on the order of 1,000 motor vehicle accidents. She has been

¹ Plaintiff's Responses to Defendant Toyota Motor Sales, U.S.A., Inc. Interrogatories are attached hereto as Ex. 5.

² Cited pages of Plaintiff's deposition are collectively attached hereto as Ex. 6.

qualified and admitted to testify regarding accident reconstruction and vehicle dynamics in both state and federal courts. *Id.* at ¶ 3.

Impact data from the subject crash event³ shows that the subject vehicle experienced a longitudinal change in velocity (Delta V) of approximately 15.4 miles per hour over 130 milliseconds in a front to rear impact direction. Yaek Affidavit at ¶ 6. Pre-crash data points for time periods up to 4.3 seconds prior to impact were recorded for this frontal impact crash event and included data with respect to vehicle speed, brake switch status, accelerator rate, and engine RPMs. *Id.* at ¶ 7. The pre-crash data is as follows:

Seconds Before Event Trigger (Sec)	Vehicle Speed (MPH)	Brake Switch Status	Accelerator Rate (V)	Engine RPMs (RPM)
-4.3	13.7	OFF	0.78	800
-3.3	14.9	OFF	0.78	800
-2.3	14.9	OFF	0.78	800
-1.3	16.2	OFF	0.78	800
-0.3	16.2	OFF	0.78	800
0.0	13.7	OFF	0.78	800

This data shows the subject vehicle to have been at idle (800 RPMs equals vehicle idle), with no accelerator pedal application (0.78 volts equals 0% accelerator pedal application), and no brake pedal application for 4.3 seconds prior to the frontal impact. *Id.* In other words, the data shows that Plaintiff was not pressing on the brake pedal or the accelerator pedal during the 4.3 seconds prior to impact with the tree. In addition, the pre-crash data for the frontal impact crash event shows the subject vehicle to be traveling between 13.7 and 16.2 miles per hour for the 4.3

³ The imaged data, a copy of which is attached hereto as Ex. 8, shows three separate recorded events consisting of a rear, front, and side “Non-Deployment” events. Yaek Affidavit at ¶ 4. Plaintiff testified at deposition that someone “scratched” his Camry in a parking lot prior to the subject accident, and that he was hit from behind after the subject accident. Sanyal Deposition at p. 214, line 10 to p. 215, line 18. The most recent event in time recorded relative to data imaging was the rear impact event described by Plaintiff. Yaek Affidavit at ¶ 5. The recorded crash event that preceded the rear impact crash event was a frontal impact, which is the subject crash. *Id.*

seconds prior to impact, and the vehicle traveling at 13.7 miles per hour at the time of the frontal impact. *Id.* at ¶ 8.

Impact speed and Delta V calculated through the accident reconstruction analysis for the subject Toyota Camry is consistent with the subject vehicle's airbag ECU recorded frontal crash event impact speed and Delta V of 13.7 miles per hour and 15.4 miles per hour, respectively. *Id.* at ¶ 9. This analysis and comparison to the airbag ECU data would establish that the ECU recorded frontal impact crash event data is consistent with the subject crash and is accurate. *Id.* at ¶ 10.

Given a typical perception/reaction time for an alert driver of 1.5 seconds, there would have been at least 4 seconds prior to impact for Plaintiff, had he been alert, to have reacted by applying his brakes and stop his vehicle. *Id.* at ¶ 11. Had Plaintiff actually applied his brakes during that time, it would have been recorded and documented in the subject Camry's airbag ECU. *Id.*

The data imaged from the ECU is therefore consistent with what is reflected in Plaintiff's medical records – namely that Plaintiff had a seizure, and lost consciousness, immediately prior to the subject accident.

Undisputed Material Facts

1. The Fairfax County police officer who investigated the accident stated in his report that Plaintiff “appeared to have lost consciousness.” Commonwealth of Virginia Department of Motor Vehicles Police Crash Report, Ex. 1, at 5.

2. The Fairfax County police officer who investigated the accident stated in his report that “[r]escue personnel arrived on scene, screened [Plaintiff] for a diabetic emergency

with negative results but did note significantly diminished response from the left side of his body.” *Id.*

3. The Fairfax County police officer who investigated the accident stated in his report that Plaintiff had no apparent physical injury, *id.* at 1.

4. The Fairfax County police officer who investigated the accident found that there was no defect in Plaintiff’s Camry. *Id.* at 2, box V5.

5. The Reston Hospital Center Emergency Room records state that Plaintiff “has a history of occasional seizures.” *See* Reston Hospital Center Clinical Provider Note, Ex. 2, at 1.

6. The Reston Hospital Center Emergency Room records state that Plaintiff “reportedly had a definite seizure.” *Id.*

7. The Reston Hospital Center Emergency Room records state that Plaintiff told Emergency Room personnel that “he remembers going to work but does not remember prior to hitting the tree.” *Id.*

8. Plaintiff was admitted to Reston Hospital Center not because of injuries he received in the accident, but because he was having recurring seizures. *Id.*

9. Dr. Chakurkar’s July 10, 2012 Consultation report states that Plaintiff “was still having seizure approximately once every 2 weeks,” and that “upon awakening, he would be aware of his surroundings and oriented. He did not remember things that happened immediately prior to the seizure” *See* Dr. Chakurkar Consultation report, Ex. 3, at 1.

10. Dr. Chakurkar’s July 10, 2012 Consultation report states that “[t]his morning, he remembers going to work, . . . and he does not remember anything after that he came about [sic] when EMS was surrounding him.” *Id.*

11. Dr. Chakurkar's July 10, 2012 Consultation report states that Plaintiff's "Tegretol level was found to be subtherapeutic," *id.*, and that the "subtherapeutic carbamazepine level may have contributed to the patient's symptoms." *Id.* at 2.

12. Dr. Ehsan's July 12, 2012 Consultation report states that Plaintiff "comes into the hospital with breakthrough seizures." *See* Dr. Ehsan Consultation report, Ex. 4, at 1.

13. Dr. Ehsan's July 12, 2012 Consultation report states that Plaintiff "comes in with breakthrough seizures resulting in motor vehicle accident with further episodes witnessed in the ER. This occurred in the setting of subtherapeutic Tegretol level" *Id.* at 2.

14. The subject Toyota Camry's airbag electronic control unit ("ECU") was imaged on April 3, 2015. *See* Affidavit of Jennifer Yaek, P.E., Ex. 7, at ¶ 4.

15. The imaged data shows the subject vehicle to have been at idle (800 RPMs equals vehicle idle), with no accelerator pedal application (0.78 volts equals 0% accelerator pedal application), and no brake pedal application for 4.3 seconds prior to the frontal impact. *Id.* at ¶ 7.

16. The imaged data for the subject crash event shows the subject vehicle to be traveling between 13.7 and 16.2 miles per hour for the 4.3 seconds prior to impact, and the vehicle traveling at 13.7 miles per hour at the time of the frontal impact. *Id.* at ¶ 8.

17. Plaintiff has not disclosed any expert witnesses. *See* Sanyal Deposition, Ex. 6, at p. 288, line 20 to p. 289, line 1.

18. Plaintiff does not intend to disclose any expert witnesses. *Id.* at p. 289, lines 2-4.

19. Plaintiff does not mean to represent himself as an expert, and will not be an expert witness at trial. *See* Sanyal Deposition at p. 260, lines 10-21.

20. Plaintiff is not an expert in automobiles, *id.* at p. 219, lines 4-5.

21. Plaintiff does not have any expertise in the subject matter of the various documents he has produced in this case. *Id.* at p. 260, lines 6-9.

21. Plaintiff is not qualified to offer expert testimony because he has never taken any courses on automotive design, manufacture or assembly, or the design, manufacture or assembly of any automotive components. *Id.* at p. 31, line 18 to p. 32, line 2.

22. Plaintiff is not qualified to offer expert testimony because he has never published any articles or papers on any topic. *Id.* at p. 32, lines 8-10.

23. Plaintiff is not qualified to offer expert testimony because none of Plaintiff's work experience dealt with automotive design, manufacture or assembly. *Id.* at p. 32, lines 14-18.

24. Plaintiff is not qualified to offer expert testimony because none of the clients Plaintiff has done work for were automobile manufacturers, or manufacturers of automotive components. *Id.* at p. 32, line 19 to p. 33, line 2.

25. Plaintiff is not qualified to offer expert testimony because he does not hold any patents of any kind. *Id.* at p. 33, lines 3-4.

26. Plaintiff is not qualified to offer expert testimony because he has never designed an automobile, or any automotive component. *Id.* at p. 33, lines 5-7.

27. Plaintiff is not qualified to offer expert testimony because he has never observed an automobile, or automotive component, being manufactured or assembled. *Id.* at p. 33, lines 8-11.

28. Plaintiff is not qualified to offer expert testimony because he has no medical training. *Id.* at p. 33, lines 12-17.

29. Plaintiff is not qualified to offer expert testimony because he has never taken any courses in biomechanics. *Id.* at p. 33, line 18 to p. 34, line 14.

30. Plaintiff is not qualified to offer expert testimony because he has never taken any courses in injury causation. *Id.* at p. 34, lines 15-16.

31. Plaintiff is not qualified to offer expert testimony because he has never taken any courses in accident investigation. *Id.* at p. 34, lines 17-19.

32. Plaintiff is not qualified to offer expert testimony because he has never taken any courses in accident reconstruction. *Id.* at p. 34, line 20 to p. 35, line 1.

33. Plaintiff is not qualified to offer expert testimony because he has never taken any courses in vehicle analysis and inspection. *Id.* at p. 35, lines 2-4.

34. Plaintiff is not qualified to offer expert testimony because he does not have any automobile mechanic training. *Id.* at p. 35, lines 5-7.

ARGUMENT

I. The Summary Judgment Standard

It is well settled that summary judgment is appropriate “if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247 (1986); *see* Fed. R. Civ. P. 56(c). Rule 56 “provides that the mere existence of *some* alleged factual dispute between the parties will not defeat an otherwise properly supported motion for summary judgment; the requirement is that there be no genuine issue of *material* fact.” *Anderson*, 477 U.S. at 247-48 (emphasis in original).

Parties opposing a properly supported motion for summary judgment bear the burden of establishing the existence of a genuine issue of material fact on each essential element of its case. *Anderson*, 477 U.S. at 248-49; *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986). “The party

opposing a properly supported motion for summary judgment ‘may not rest upon the mere allegations or denials of [his] pleadings,’ but rather must ‘set forth specific facts showing that there is a genuine issue for trial.’” *Bouchat v. Baltimore Ravens Football Club, Inc.*, 346 F.3d 514, 525 (4th Cir. 2003) “A mere scintilla of evidence is not enough to create a fact issue; there must be evidence on which a jury might rely.” *Barwick v. Celotex Corp.*, 736 F.2d 946, 958-59 (4th Cir. 1984) (quotation omitted). If the nonmoving party “fail[s] to make a sufficient showing on an essential element of [their] case with respect to which [they have] the burden of proof,” then “the plain language of Rule 56(c) mandates the entry of summary judgment.” *Celotex Corp.*, 477 U.S. at 323.

II. Each of Plaintiff’s Causes of Action Require Proof Of Defect and Proof of Causation

Under Virginia law, “[t]he standard of safety of goods imposed on the seller or manufacturer is essentially the same whether the theory of liability is labeled warranty or negligence.” *Garrett v. I.R. Witzer Co., Inc.*, 258 Va. 264, 267 (1999). “Under either the warranty theory or the negligence theory the plaintiff must show, (1) that the goods were unreasonably dangerous either for the use to which they would ordinarily be put or for some other reasonably foreseeable purpose, and (2) that the unreasonably dangerous condition existed when the goods left the defendant’s hands.” *Id.* at 267-268. *See also Musick v. Dorel Juvenile Group, Inc.*, 847 F. Supp. 2d 887, 901 (W.D. Va. 2012)(“It is well settled in Virginia that the elements of a product liability claim are ‘essentially the same whether the theory of liability is labeled warranty or negligence,’” citing *Jeld-Wen, Inc. v. Gamble*, 256 Va. 144 (1998)); *Austin v. Clark Equipment Co.*, 48 F.3d 833 (1995).

Under either theory, Plaintiff must prove a causal connection between Defendants' conduct and his alleged injuries. *See, e.g., Hartwell v. Danek Medical, Inc.*, 47 F. Supp. 2d 703, 707 (W.D. Va. 1999).

**III. Plaintiff's Claims Require Expert Testimony
To Prove The Existence Of A Defect and to Prove Causation**

Virginia law is clear that the mere fact of an accident or malfunction does not establish a product liability claim. *See Logan v. Montgomery Ward & Co., Inc.*, 216 Va. 425 (1975). In *Logan*, the plaintiff was suing for injuries she received as the result of an explosion of her gas stove. In finding that plaintiff had not met her burden of proof, the Virginia Supreme Court held that "[t]he mere fact of an explosion does not establish the negligence of either the manufacturer or seller of the stove, and does not establish the stove was defective." *Id.* at 428. The court further observed that, even though there was a gas leak that caused the explosion, "it is also known that occasionally there is a malfunction which cannot be attributed to negligence or breach of warranty by the manufacturer or seller, but rather is attributable solely to . . . some unknown cause." *Id.* at 429. Thus, even assuming that there was some "malfunction" in Plaintiff's 2011 Toyota Camry, which there was not, Plaintiff would still need to introduce competent expert testimony to prove that Defendants were responsible for the malfunction. *See also Wilder v. Toyota Motor Sales, U.S.A., Inc.*, 23 Fed. Appx. 155, **3 (4th Cir. 2001) ("Virginia law specifically reject[s]" an "attempt[] to rely upon an unexplained malfunction to prove [plaintiff's] case.").

In *Hyundai Motor Company, Ltd. v. Duncan*, 766 S.E.2d 893 (Va. 2015), plaintiffs claimed that the failure of their side bag to deploy had resulted in the driver plaintiff's closed head injury. The Virginia Supreme Court reversed a \$14.1 million verdict for plaintiffs, finding that the plaintiffs' expert defect testimony lacked a sufficient factual basis, was based on an *ipse*

dixit assumption, and was inadmissible. After ruling that the expert's testimony was inadmissible, the court held that "[B]ecause [the expert's] opinion supplied the only support for the Duncan's claim that the vehicle was unreasonably dangerous, the inadmissibility of [the expert's] opinion as a matter of law is fatal to the Duncan's claim and entitles Hyundai to judgment as a matter of law." *Id.* at 898. *See also Piltch v. Ford Motor Co.*, 778 F.3d 628, 632-633 (7th Cir. 2015)(plaintiffs claiming that airbag non-deployment enhanced their injuries could not establish existence of defect without expert testimony - summary judgment for Ford affirmed); *Wood v. Toyota Motor Corp.*, 760 A. 2d 315, 319 (Md.App. 2000)("The issue of whether an air bag was defectively designed is well 'beyond the ken of the average layman.' The correct resolution of that issue requires the application of science, mechanics, and engineering, rather than of matters that jurors 'would be aware [of] by virtue of common knowledge.' We therefore hold that the products liability plaintiff who claims to have been injured due to the defective design of an air bag must present expert testimony to generate a jury issue on whether the bag was defective.")

Under Virginia law, Plaintiff also must prove through expert testimony that the alleged defects in his 2011 Toyota Camry caused his alleged injuries. *See Gauthreaux v. United States*, 694 F. Supp. 2d 460 (E.D. Va. 2009). In *Gauthreaux*, plaintiff sued the manufacturer of an allegedly defective forklift that ran over his left foot, causing his leg to be amputated. The District Court granted the manufacturer's motion for summary judgment because the testimony of plaintiff's expert regarding whether a defect in the forklift caused plaintiff's injuries had been "drastically limited." *Id.* at 465. The court noted that plaintiff had the burden of establishing proof of legal causation, *id.*, and further observed that while "[p]roving cause by an expert in a products liability action is not mandatory under Virginia law . . . in a products liability action,

proof of causation must ordinarily be supported by expert testimony because of the complexity of the causation facts.” *Id.* See also, e.g., *McCauley v. Purdue Pharma L.P.*, 331 F. Supp. 2d. 449, 464 (W.D. Va. 2004)(same); *Piltch, supra* at 634 (in case alleging air bag should have deployed, “without expert testimony, a lay juror could not distinguish between the injuries caused by the collision and the enhanced injuries caused by the air bags’ failure to deploy without engaging in pure speculation.”).

**IV. Plaintiff Has No Admissible Evidence
Regarding The Existence Of An Alleged Defect**

Plaintiff has not disclosed any expert witnesses in this case, and does not intend to disclose any experts. See Sanyal Deposition, Ex. 6, at p. 288, line 20 to p. 289, line 1. He does not intend to offer expert testimony himself. *Id.* at p. 260, lines 10-21. Nor is he qualified to do so. *Id.* at p. 219, lines 4-5; p. 260, lines 6-9; p. 31, line 18 to p. 35, line 7. As a result, he lacks any admissible evidence regarding the existence of an alleged defect in his 2011 Toyota Camry, and Defendants are entitled to summary judgment on all of Plaintiffs’ product defect claims.

A. Plaintiff’s Airbag Claims

Plaintiff’s claims that the airbags and associated components in his 2011 Toyota Camry are defective because they did not deploy in the subject accident boil down to his belief that the airbags should have deployed. For example, Plaintiff testified that the basis for his overall claim that the airbags in his 2011 Toyota Camry were defective was the occurrence of the subject accident. *Id.* at p. 240, line 10 to p. 241, line 18. In the same vein, the basis for his claim that the placement of the crash sensors in the 2011 Camry is defective is the subject accident, and “[c]ommon sense based on [his] personal feelings.” *Id.* at p. 244, line 20 to p. 247, line 12. Similarly, Plaintiff testified that it was his “personal feeling” that the 2011 Toyota Camry failed

to meet Federal Motor Vehicle Safety Standard 208 because the airbags did not deploy in the subject accident. *Id.* at p. 250, line 17 to p. 256, line 5.

In contrast, Defendants have admissible evidence, offered by a qualified expert witness, that the airbags in the 2011 Camry were not defective, and met all applicable governmental and industry standards.

William Van Arsdell, Ph.D. inspected the subject vehicle on behalf of Defendants, and issued a report.⁴ Dr. Van Arsdell has a Ph.D. in Mechanical Engineering from the Massachusetts Institute of Technology, a M.S. in Mechanical Engineering from the University of Illinois at Urbana-Champaign, and a B.S. in Mechanical Engineering from the University of Arizona. *See* May 1, 2015 Affidavit of William Van Arsdell, Ph.D., attached hereto as Ex. 10, at ¶ 2. He has extensive experience evaluating the performance of seat belts, airbags, child restraint systems, and the crashworthiness of motor vehicles. *Id.* at ¶ 3. He has conducted over one hundred full-scale vehicle crash tests and sled tests. He has investigated hundreds of motor vehicle accidents. *Id.* His research addresses occupant protection, occupant kinematics, accident reconstruction, mechanics, material selection, and the deformation, fatigue and fracture of materials. *Id.*

Dr. Van Arsdell's inspection of the subject vehicle revealed that the vehicle is equipped with a driver's front airbag, and that the driver's position is also equipped with a seat mounted thorax side airbag, and a roof-rail curtain airbag. *Id.* at ¶ 4. Airbags are supplemental restraint systems designed to work with the seat belt to protect the occupant in moderate to high-severity crashes. *Id.* at ¶ 5. The frontal airbag for the driver's seating position (located in the steering wheel), is not designed to deploy in every frontal crash; many, if not most, of the frontal tow-away crashes that occur in the United States every year are not severe enough to warrant frontal

⁴ Dr. Van Arsdell's report is attached as Ex. 9 hereto.

airbag deployment. *Id.* There are several sound engineering and industry-accepted reasons for this. *Id.* at ¶ 6. Airbags are high-energy devices, designed to deploy when the risk of injury begins to outweigh the potential of injury from the airbags themselves. *Id.* There is often some minor injury associated with every airbag deployment. *Id.* Additionally, airbags, if deployed unnecessarily, could startle or confuse a driver such that the deployment itself may increase the chance of subsequent impacts with loss of control. *Id.* Unnecessary airbag deployments also drive up the cost of vehicle repairs, cause loss of vehicle utility for their owner, and generally increase societal costs unnecessarily. *Id.*

It is well-established that there are different methods of discussing the deployment thresholds of frontal airbag systems, including both barrier equivalent velocity (BEV) speeds, and delta-V; these terms and meanings are not interchangeable. *Id.* at ¶ 7. Data supplied by Toyota indicate that the subject vehicle had a no-deploy threshold of 11.1 mph BEV, and a must-deploy threshold of 16.2 mph BEV. *Id.* Toyota ran a deployment confirmation test at 26.7 km/hr (16.6 mph) BEV that resulted in a vehicle delta-V of 18.8 mph. *Id.* Airbag sensing and control systems must incorporate a “gray zone;” a range of impact barrier impact velocities where the airbag may or may not deploy. *Id.* at ¶ 8. NHTSA refers to the gray zone as “the range of speeds between the no-fire and all-fire thresholds in which the air bag may or may not deploy.” *Id.* Every frontal airbag system produced has a gray zone. *Id.* The delta-V from the ECU download indicates that the subject accident was less severe than the subject vehicle’s minimum “must-fire” condition. *Id.* at ¶ 7.

There is considerable variation in frontal airbag deployment thresholds from one vehicle model to another. *Id.* at ¶ 8. Each vehicle airbag system must be designed to work in concert with the vehicle structure and seat belt. *Id.* The objective of all occupant protection systems

including airbag systems is to provide a reasonable level of protection in reasonably foreseeable accidents. *Id.* at ¶ 9. NHTSA has consistently stated that they defer to the vehicle manufacturers to determine the proper deployment levels for frontal airbags. *Id.*

The location of the frontal sensors for the 2011 Toyota Camry is typical for such vehicles, and offers good placement in order to correctly sense a range of different crash types. *Id.* at ¶ 10. The range of evaluations and tests that have been conducted by Toyota demonstrate that the location of the frontal sensors is appropriate. *Id.*

The subject frontal airbag algorithm has been carefully evaluated and tested by Toyota. *Id.* In addition, other researchers, including NHTSA, have extensively tested the subject algorithm and vehicle. *Id.* The subject vehicle driver's frontal airbag system performs well, is not defective, and has not been recalled. *Id.* at ¶ 11. Data supplied by Toyota show that they conducted a large number of tests on the subject vehicle, consistent with sound engineering and industry practice. *Id.* These tests demonstrate that the frontal airbag will deploy when required, and provide effective protection. *Id.*

Publically available materials, as well as materials produced by Toyota, show that for the 2011 Toyota Camry, the seat belts meet or exceed the requirements of FMVSS 209. *Id.* at ¶ 12. The occupant restraint system, including but not limited to the vehicle's airbags and seat belts, meets or exceeds the dynamic occupant protection and static requirements of FMVSS 208 and FMVSS 214. *Id.* The 2011 Toyota Camry was certified to the requirements of the FMVSS 208 "Advanced Airbag" rulemaking, which includes an updated suite of impact conditions, as well additional anthropomorphic test devices (ATDs), including a 5th percentile female-sized ATD. *Id.*

As his Affidavit demonstrates, Dr. Van Arsdell holds the opinions, and he will offer the opinions at trial, that the airbags in the 2011 Camry were not defective, and met all applicable governmental and industry standards. Plaintiff has no admissible evidence, through expert testimony or otherwise, to refute Dr. Van Arsdell's opinions. Plaintiff has no admissible evidence that the airbags in the 2011 Camry were defective, or failed to meet all applicable governmental and industry standards, or that any alleged defect existed at the time the vehicle left Defendants' hands. Under the holdings in *Logan*, *Wilder*, *Hyundai*, *Piltch* and *Wood*, *supra*, Plaintiff's failure to provide expert testimony entitles Defendants to summary judgment on his airbag defect claims.

B. Plaintiff's Unintended Acceleration Claims

Plaintiff's allegation that his 2011 Toyota Camry is defective because it experienced an unintended acceleration event is based solely upon: (1) certain documents he produced in response to Defendants' discovery requests; (2) Google searches he performed (which turned up some additional unidentified documents that he didn't print out and produce to Defendants); and (3) news and other media reports. Sanyal Deposition, Ex. 6, at p. 238, line 6 to p. 239, line 2. In short, the only basis for his defect claim amounts to unsupported supposition based on his "review" of materials and information he found on the Internet. This is particularly true because Plaintiff has no expert witness that can draw admissible conclusions, even if that were possible, from the documents and other materials Plaintiff purportedly reviewed.

In contrast, Defendants have admissible evidence, offered by a qualified expert witness, that the 2011 Camry was not defective, and in any event did not experience an unintended acceleration event.

Carr Engineering inspected the subject vehicle on behalf of Defendants, and Karl Stopschinski of Carr Engineering issued an expert report in this case.⁵ Mr. Stopschinski has a Bachelor of Science (Electrical Engineering) from Baylor University. *See* May 1, 2015 Affidavit of Karl Stopschinski, attached hereto as Ex. 12, at ¶ 2. He has extensive experience evaluating the performance of electronic and other systems in motor vehicles. *Id.* He has conducted hundreds of inspections similar to the inspection performed on the subject vehicle, and has investigated hundreds of motor vehicle accidents. *Id.*

The 2011 Toyota Camry is equipped with Toyota's electronic throttle control system (ETCSi). *Id.* at ¶ 3. It is a safe and reliable system that controls airflow to the engine based upon driver input and vehicle operating parameters. *Id.* Key components of the ETCSi system are the engine Electronic Control Module (ECM), the accelerator pedal assembly, the electronic throttle body, and the cruise control switch. *Id.*

The engine ECM is designed with redundant architecture for error monitoring and failsafe response to error detection. *Id.* at ¶ 4. The Engine ECM controls the ETCSi and features two CPUs to ensure consistent operation. *Id.* The system provides failsafe modes of operation that are limited engine power states, invoked when certain faults are detected. *Id.*

The accelerator pedal is designed with two return springs that ensure the pedal will remain in the idle position when not depressed by an external force. *Id.* at ¶ 5. The pedal assembly contains two, redundant, position sensors each with dedicated power and return lines. *Id.* Each pedal sensor provides pedal position information as a unique value which is continually compared to the other sensor's value for consistency. *Id.* If a problem with the pedal sensors is detected a failsafe, low-power, vehicle operational mode is invoked. *Id.*

⁵ Mr. Stopchinski's report is attached as Ex. 11 hereto.

The electronic throttle body contains the throttle valve, throttle motor, and throttle position sensors (TPS). *Id.* at ¶ 6. The throttle valve controls the air delivery to the engine and is returned to, or held in, the idle position by two return springs. *Id.* The springs will maintain the throttle valve in the default idle position if power is removed from the engine. *Id.* The throttle motor is connected to the throttle valve and provides actuation of the valve by engine ECM command. *Id.* The motor circuit is monitored for stuck throttle conditions and commanded throttle position is verified through feedback signals from the throttle position sensors (TPS). *Id.* at ¶ 7. The throttle body assembly contains two TPS sensors for redundancy. *Id.* If a discrepancy is detected the system enters a low power, failsafe mode. Redundancy, error monitoring, error detection and failsafe operation are designed into the Toyota ETCSi system. *Id.* During the inspection of Plaintiff's vehicle, there was no indication of a problem with any of the components of the electronic throttle control system, or with any of the components of the brake or accelerator pedals. *Id.*

Plaintiff's claim that his 2011 Toyota Camry lacks an effective brake override system is untrue. *Id.* at ¶ 8. The vehicle is equipped with Toyota's Smart Stop Technology that functions as a Brake Throttle Override system. *Id.*⁶ The proper function of this system was evaluated and confirmed at the vehicle inspection. *Id.*

As his Affidavit demonstrates, Mr. Stopschinski holds the opinions, and he will offer the opinions at trial, that the 2011 Camry was not defective, and in any event did not experience an unintended acceleration event. Mr. Sanyal has no admissible evidence, through expert testimony or otherwise, to refute Mr. Stopschinski's opinions. Plaintiff has no admissible evidence that any alleged unintended acceleration event was the result of a defect in the 2011 Toyota Camry, or

⁶ This fact is further evidence that Plaintiff's defect claims are nothing more than unsupported supposition. Plaintiff is claiming that the vehicle is defective because it is not equipped with a brake override system when it is, in fact, equipped with just such a system.

that the alleged defect existed at the time the vehicle left Defendants' hands. Under the holdings in *Logan*, *Wilder*, *Hyundai*, *Piltch* and *Wood*, *supra*, Plaintiff's failure to provide expert testimony entitles Defendants to summary judgment on his alleged unintended acceleration defect claims.

**V. Plaintiff Has No Evidence Of A Causal
Connection Between Any Alleged Defect And His Injuries**

Even if Plaintiff was able to prove that a defect existed in the 2011 Toyota Camry, Defendants would be entitled to summary judgment on the independent ground that Plaintiff does not have any evidence, admissible or otherwise, that an alleged defect caused his injuries. He has not designated any expert witnesses, and does not intend to designate any expert witnesses, medical or otherwise. Moreover, Plaintiff's medical records suggest that the accident itself resulted from Plaintiff having a seizure and losing consciousness. He therefore cannot satisfy the requirement of Virginia law, as applied in *Gauthreaux*, *McCauley* and *Piltch*, *supra*, that in this products liability action he prove through expert testimony that the alleged defects in his 2011 Toyota Camry caused his alleged injuries. Plaintiff's failure to provide expert testimony regarding causation entitles Defendants to summary judgment on all of Plaintiff's claims against them.

Conclusion

Plaintiff does not have any admissible evidence that there was a defect in his 2011 Toyota Camry. Even if that were not the case, Plaintiff has no admissible evidence that an alleged defect in the 2011 Toyota Camry caused his alleged injuries. Defendants Toyota Motor Sales, U.S.A., Inc., Toyota Motor Manufacturing Kentucky, Inc. and Toyota Motor Engineering & Manufacturing North America, Inc. are therefore entitled to judgment as a matter of law on

Plaintiff's claims against them, and Defendants respectfully request that this Court enter an order granting summary judgment in their favor.

/s/ Joel A. Dewey

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